

## SEQUENCE LISTING

<110> NAGAI, RYOZO  
MANABE, ICHIRO  
ISHIHARA, ATSUSHI  
TOTTORI, TSUNEAKI

<120> RNA CAPABLE OF SUPPRESSING EXPRESSION OF KLF5 GENE

<130> P29215

<140> 10/565,997

<141> 2006-01-27

<150> PCT/JP04/11223

<151> 2004-07-29

<150> JP 2003-202863

<151> 2003-07-29

<150> JP 2004-075115

<151> 2004-03-16

<160> 52

<170> PatentIn Ver. 3.3

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&lt;210&gt; 48

&lt;211&gt; 25

&lt;212&gt; DNA

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&lt;400&gt; 48

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25

&lt;210&gt; 49

&lt;211&gt; 1591

&lt;212&gt; DNA

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&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (167)..(1504)

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gatcgcgatc gctccgtgtc ccgctcccgat aatccccaga ccgtcc atg ccc acg 175  
Met Pro Thr  
1cgg gtg ctg acc atg agc gcc cgc ctg gga cca ctg ccc cag ccg ccg 223  
Arg Val Leu Thr Met Ser Ala Arg Leu Gly Pro Leu Pro Gln Pro Pro  
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Ala Ala Gln Ala Glu Pro Val Phe Ala Gln Leu Lys Pro Val Leu Gly  
20 25 30 35gct gcg aac ccg gcc cgc gac gcg gcg ctc ttc tcc gga gac gat ctg 319  
Ala Ala Asn Pro Ala Arg Asp Ala Ala Leu Phe Ser Gly Asp Asp Leu  
40 45 50aaa cac gcg cac cac cac ccg cct gcg ccg ccg cca gcc gct ggc ccg 367  
Lys His Ala His His His Pro Pro Ala Pro Pro Pro Ala Ala Gly Pro  
55 60 65

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Arg Leu Pro Ser Glu Glu Leu Val Gln Thr Arg Cys Glu Met Glu Lys	
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Tyr Leu Thr Pro Gln Leu Pro Pro Val Pro Ile Ile Ser Glu His Lys	
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Lys Tyr Arg Arg Asp Ser Ala Ser Val Val Asp Gln Phe Phe Thr Asp	
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Thr Glu Gly Ile Pro Tyr Ser Ile Asn Met Asn Val Phe Leu Pro Asp	
120 125 130	
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Ile Thr His Leu Arg Thr Gly Leu Tyr Lys Ser Gln Arg Pro Cys Val	
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aca cag atc aag aca gaa cct gtt acc att ttc agc cac cag agc gag	655
Thr Gln Ile Lys Thr Glu Pro Val Thr Ile Phe Ser His Gln Ser Glu	
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Ser Thr Ala Pro Pro Pro Pro Pro Ala Pro Thr Gln Ala Leu Pro Glu	
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ttc act agt atc ttc agc tcc cac cag acc aca gcg cca cca cag gag	751
Phe Thr Ser Ile Phe Ser Ser His Gln Thr Thr Ala Pro Pro Gln Glu	
180 185 190 195	
gtg aac aat atc ttc atc aaa caa gaa ctt cct ata cca gat ctt cat	799
Val Asn Asn Ile Phe Ile Lys Gln Glu Leu Pro Ile Pro Asp Leu His	
200 205 210	
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Leu Ser Val Pro Ser Gln Gln Gly His Leu Tyr Gln Leu Leu Asn Thr	
215 220 225	
ccg gat cta gac atg ccc agt tcg aca aac cag acg gca gta atg gac	895
Pro Asp Leu Asp Met Pro Ser Ser Thr Asn Gln Thr Ala Val Met Asp	
230 235 240	
acc ctt aat gtt tct atg gca ggc ctt aac cca cac ccc tct gct gtt	943
Thr Leu Asn Val Ser Met Ala Gly Leu Asn Pro His Pro Ser Ala Val	
245 250 255	
cca cag acg tca atg aaa cag ttc cag ggc atg ccc cct tgc acg tac	991
Pro Gln Thr Ser Met Lys Gln Phe Gln Gly Met Pro Pro Cys Thr Tyr	
260 265 270 275	
acc atg cca agt cag ttt ctt cca cag cag gcc act tat ttt ccc ccg	1039
Thr Met Pro Ser Gln Phe Leu Pro Gln Gln Ala Thr Tyr Phe Pro Pro	
280 285 290	

tca cca cca agc tca gag cct gga agt ccc gat aga caa gct gag atg 1087  
 Ser Pro Pro Ser Ser Glu Pro Gly Ser Pro Asp Arg Gln Ala Glu Met  
 295 300 305  
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 aaa ctg gcg att cac aac cca aat tta cct gcc act ctg cca gtt aat 1183  
 Lys Leu Ala Ile His Asn Pro Asn Leu Pro Ala Thr Leu Pro Val Asn  
 325 330 335  
 tcg cca act ctc cca cct gtc aga tac aac aga agg agt aac ccg gat 1231  
 Ser Pro Thr Leu Pro Pro Val Arg Tyr Asn Arg Arg Ser Asn Pro Asp  
 340 345 350 355  
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 Leu Glu Lys Arg Arg Ile His Phe Cys Asp Tyr Asn Gly Cys Thr Lys  
 360 365 370  
 gtt tat aca aag tcg tct cac tta aaa gct cac ctg agg act cat acg 1327  
 Val Tyr Thr Lys Ser Ser His Leu Lys Ala His Leu Arg Thr His Thr  
 375 380 385  
 ggc gag aag ccc tac aag tgc acc tgg gag ggc tgc gac tgg agg ttt 1375  
 Gly Glu Lys Pro Tyr Lys Cys Thr Trp Glu Gly Cys Asp Trp Arg Phe  
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 gcc cgg tcg gat gag ctg acc cgc cac tac agg aag cac acg ggc gcc 1423  
 Ala Arg Ser Asp Glu Leu Thr Arg His Tyr Arg Lys His Thr Gly Ala  
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 Lys Pro Phe Gln Cys Met Val Cys Gln Arg Ser Phe Ser Arg Ser Asp  
 420 425 430 435  
 cac ctc gcg ctg cac atg aag cgc cac cag aac tgagcgagcg aacgctgcgc 1524  
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acgtgtggaa gagcggaaga gttttgcttt tctgcgcgcg cttcgaaaac tgcttgccgc 180  
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 cgaccaagc cagcgtgggc gaggtgggaa gtgcgcccga cccgcgcctg gagctgcgcc 300  
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 Pro Val Pro Gln Pro Pro Ala Pro Gln Asp Glu Pro Val Phe Ala Gln  
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ctc aag ccg gtg ctg ggc gcc gcg aat ccg gcc cgc gac gcg gcg ctc 446  
 Leu Lys Pro Val Leu Gly Ala Ala Asn Pro Ala Arg Asp Ala Ala Leu  
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ttc ccc ggc gag gag ctg aag cac gcg cac cac cgc ccg cag gcg cag 494  
 Phe Pro Gly Glu Glu Leu Lys His Ala His His Arg Pro Gln Ala Gln  
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ccc gcg ccc gcg cag gcc ccg cag ccg gcc cag ccg ccc gcc acc ggc 542  
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                   65                  70                  75

ccg ccg ctg cct cca gag gac ctg gtc cag aca aga tgt gaa atg gag 590  
 Pro Arg Leu Pro Pro Glu Asp Leu Val Gln Thr Arg Cys Glu Met Glu  
                   80                  85                  90

aag tat ctg aca cct cag ctt cct cca gtt cct ata att cca gag cat 638  
 Lys Tyr Leu Thr Pro Gln Leu Pro Pro Val Pro Ile Ile Pro Glu His  
                   95                  100                  105

aaa aag tat aga cga gac agt gcc tca gtc gta gac cag ttc ttc act 686  
 Lys Lys Tyr Arg Arg Asp Ser Ala Ser Val Val Asp Gln Phe Phe Thr  
                   110                  115                  120                  125

gac act gaa ggg tta cct tac agt atc aac atg aac gtc ttc ctc cct 734  
 Asp Thr Glu Gly Leu Pro Tyr Ser Ile Asn Met Asn Val Phe Leu Pro  
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gac atc act cac ctg aga act ggc ctc tac aaa tcc cag aga ccg tgc 782  
 Asp Ile Thr His Leu Arg Thr Gly Leu Tyr Lys Ser Gln Arg Pro Cys  
                   145                  150                  155

gta aca cac atc aag aca gaa cct gtt gcc att ttc agc cac cag agt 830  
 Val Thr His Ile Lys Thr Glu Pro Val Ala Ile Phe Ser His Gln Ser  
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gaa acg act gcc cct cct ccg gcc ccg acc cag gcc ctc cct gag ttc 878  
 Glu Thr Thr Ala Pro Pro Pro Ala Pro Thr Gln Ala Leu Pro Glu Phe  
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acc agt ata ttc agc tca cac cag acc gca gct cca gag gtg aac aat 926  
 Thr Ser Ile Phe Ser Ser His Gln Thr Ala Ala Pro Glu Val Asn Asn  
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Pro Thr Gln Gln Gly His Leu Tyr Gln Leu Leu Asn Thr Pro Asp Leu	
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Asp Met Pro Ser Ser Thr Asn Gln Thr Ala Ala Met Asp Thr Leu Asn	
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Val Ser Met Ser Ala Ala Met Ala Gly Leu Asn Thr His Thr Ser Ala	
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Val Pro Gln Thr Ala Val Lys Gln Phe Gln Gly Met Pro Pro Cys Thr	
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Tyr Thr Met Pro Ser Gln Phe Leu Pro Gln Gln Ala Thr Tyr Phe Pro	
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Pro Ser Pro Pro Ser Ser Glu Pro Gly Ser Pro Asp Arg Gln Ala Glu	
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Ser Lys Leu Ala Ile His Asn Pro Asn Leu Pro Thr Thr Leu Pro Val	
335 340 345	
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370 375 380	
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Phe Ala Arg Ser Asp Glu Leu Thr Arg His Tyr Arg Lys His Thr Gly	
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 Ala Lys Pro Phe Gln Cys Gly Val Cys Asn Arg Ser Phe Ser Arg Ser  
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gac cac ctg gcc ctg cat atg aag agg cac cag aac tgagcactgc 1692  
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 gttttcacat atgacaatgt tgcatttatg atgcagtttt caagtacaa aacgttgaat 2652  
 tgatgatgca gttttcatat atcgagatgt tcgctcgtgc agtactgttg gttaaatgac 2712  
 aatttatgtg gattttgcat gtaatacaca gtgagacaca gtaattttat ctaaattaca 2772  
 gtgcagttta gttaattctat taatactgac tcagtgtctg cttttaaata taaatgatata 2832  
 gttgaaaact taaggaagca aatgctacat atatgcaata taaaatagta atgtgatgct 2892  
 gatgctgtta accaaagggc agaataaata agcaaaatgc caaaaggggt cttaattgaa 2952  
 atgaaaattt aattttgttt ttaaaatatt gtttatcttt atttattttg tggtaatata 3012  
 gtaagttttt ttagaagaca attttcataa cttgataaat tatagttttg tttgttagaa 3072  
 aagttgctct taaaagatgt aaatagatga caaacgatgt aaataatttt gtaagaggct 3132  
 tcaaatgtt tatacgtgga aacacaccta catgaaaagc agaaatcggg tgctgttttg 3192

cttcttttttc cctcttattt ttgtattgtg gtcatttcct atgcaaataa tggagcaaac 3252  
 agctgtatag ttgtagaatt ttttgagaga atgagatggt tatatattaa cgacaatttt 3312  
 ttttttggaa aataaaaagt gcctaaaaga aaaaaaaaaa aaaaaaa 3359

<210> 51  
 <211> 446  
 <212> PRT  
 <213> Mus musculus

<400> 51  
 Met Pro Thr Arg Val Leu Thr Met Ser Ala Arg Leu Gly Pro Leu Pro  
 1 5 10 15  
 Gln Pro Pro Ala Ala Gln Ala Glu Pro Val Phe Ala Gln Leu Lys Pro  
 20 25 30  
 Val Leu Gly Ala Ala Asn Pro Ala Arg Asp Ala Ala Leu Phe Ser Gly  
 35 40 45  
 Asp Asp Leu Lys His Ala His His His Pro Pro Ala Pro Pro Pro Ala  
 50 55 60  
 Ala Gly Pro Arg Leu Pro Ser Glu Glu Leu Val Gln Thr Arg Cys Glu  
 65 70 75 80  
 Met Glu Lys Tyr Leu Thr Pro Gln Leu Pro Pro Val Pro Ile Ile Ser  
 85 90 95  
 Glu His Lys Lys Tyr Arg Arg Asp Ser Ala Ser Val Val Asp Gln Phe  
 100 105 110  
 Phe Thr Asp Thr Glu Gly Ile Pro Tyr Ser Ile Asn Met Asn Val Phe  
 115 120 125  
 Leu Pro Asp Ile Thr His Leu Arg Thr Gly Leu Tyr Lys Ser Gln Arg  
 130 135 140  
 Pro Cys Val Thr Gln Ile Lys Thr Glu Pro Val Thr Ile Phe Ser His  
 145 150 155 160  
 Gln Ser Glu Ser Thr Ala Pro Pro Pro Pro Pro Ala Pro Thr Gln Ala  
 165 170 175  
 Leu Pro Glu Phe Thr Ser Ile Phe Ser Ser His Gln Thr Thr Ala Pro  
 180 185 190  
 Pro Gln Glu Val Asn Asn Ile Phe Ile Lys Gln Glu Leu Pro Ile Pro  
 195 200 205  
 Asp Leu His Leu Ser Val Pro Ser Gln Gln Gly His Leu Tyr Gln Leu  
 210 215 220  
 Leu Asn Thr Pro Asp Leu Asp Met Pro Ser Ser Thr Asn Gln Thr Ala  
 225 230 235 240

Val Met Asp Thr Leu Asn Val Ser Met Ala Gly Leu Asn Pro His Pro  
245 250 255

Ser Ala Val Pro Gln Thr Ser Met Lys Gln Phe Gln Gly Met Pro Pro  
260 265 270

Cys Thr Tyr Thr Met Pro Ser Gln Phe Leu Pro Gln Gln Ala Thr Tyr  
275 280 285

Phe Pro Pro Ser Pro Pro Ser Ser Glu Pro Gly Ser Pro Asp Arg Gln  
290 295 300

Ala Glu Met Leu Gln Asn Leu Thr Pro Pro Pro Ser Tyr Ala Ala Thr  
305 310 315 320

Ile Ala Ser Lys Leu Ala Ile His Asn Pro Asn Leu Pro Ala Thr Leu  
325 330 335

Pro Val Asn Ser Pro Thr Leu Pro Pro Val Arg Tyr Asn Arg Arg Ser  
340 345 350

Asn Pro Asp Leu Glu Lys Arg Arg Ile His Phe Cys Asp Tyr Asn Gly  
355 360 365

Cys Thr Lys Val Tyr Thr Lys Ser Ser His Leu Lys Ala His Leu Arg  
370 375 380

Thr His Thr Gly Glu Lys Pro Tyr Lys Cys Thr Trp Glu Gly Cys Asp  
385 390 395 400

Trp Arg Phe Ala Arg Ser Asp Glu Leu Thr Arg His Tyr Arg Lys His  
405 410 415

Thr Gly Ala Lys Pro Phe Gln Cys Met Val Cys Gln Arg Ser Phe Ser  
420 425 430

Arg Ser Asp His Leu Ala Leu His Met Lys Arg His Gln Asn  
435 440 445

&lt;210&gt; 52

&lt;211&gt; 457

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 52

Met Ala Thr Arg Val Leu Ser Met Ser Ala Arg Leu Gly Pro Val Pro  
1 5 10 15

Gln Pro Pro Ala Pro Gln Asp Glu Pro Val Phe Ala Gln Leu Lys Pro  
20 25 30

Val Leu Gly Ala Ala Asn Pro Ala Arg Asp Ala Ala Leu Phe Pro Gly  
35 40 45

Glu Glu Leu Lys His Ala His His Arg Pro Gln Ala Gln Pro Ala Pro  
50 55 60

Ala	Gln	Ala	Pro	Gln	Pro	Ala	Gln	Pro	Pro	Ala	Thr	Gly	Pro	Arg	Leu	65	70	75	80
Pro	Pro	Glu	Asp	Leu	Val	Gln	Thr	Arg	Cys	Glu	Met	Glu	Lys	Tyr	Leu	85	90	95	
Thr	Pro	Gln	Leu	Pro	Pro	Val	Pro	Ile	Ile	Pro	Glu	His	Lys	Lys	Tyr	100	105	110	
Arg	Arg	Asp	Ser	Ala	Ser	Val	Val	Asp	Gln	Phe	Phe	Thr	Asp	Thr	Glu	115	120	125	
Gly	Leu	Pro	Tyr	Ser	Ile	Asn	Met	Asn	Val	Phe	Leu	Pro	Asp	Ile	Thr	130	135	140	
His	Leu	Arg	Thr	Gly	Leu	Tyr	Lys	Ser	Gln	Arg	Pro	Cys	Val	Thr	His	145	150	155	160
Ile	Lys	Thr	Glu	Pro	Val	Ala	Ile	Phe	Ser	His	Gln	Ser	Glu	Thr	Thr	165	170	175	
Ala	Pro	Pro	Pro	Ala	Pro	Thr	Gln	Ala	Leu	Pro	Glu	Phe	Thr	Ser	Ile	180	185	190	
Phe	Ser	Ser	His	Gln	Thr	Ala	Ala	Pro	Glu	Val	Asn	Asn	Ile	Phe	Ile	195	200	205	
Lys	Gln	Glu	Leu	Pro	Thr	Pro	Asp	Leu	His	Leu	Ser	Val	Pro	Thr	Gln	210	215	220	
Gln	Gly	His	Leu	Tyr	Gln	Leu	Leu	Asn	Thr	Pro	Asp	Leu	Asp	Met	Pro	225	230	235	240
Ser	Ser	Thr	Asn	Gln	Thr	Ala	Ala	Met	Asp	Thr	Leu	Asn	Val	Ser	Met	245	250	255	
Ser	Ala	Ala	Met	Ala	Gly	Leu	Asn	Thr	His	Thr	Ser	Ala	Val	Pro	Gln	260	265	270	
Thr	Ala	Val	Lys	Gln	Phe	Gln	Gly	Met	Pro	Pro	Cys	Thr	Tyr	Thr	Met	275	280	285	
Pro	Ser	Gln	Phe	Leu	Pro	Gln	Gln	Ala	Thr	Tyr	Phe	Pro	Pro	Ser	Pro	290	295	300	
Pro	Ser	Ser	Glu	Pro	Gly	Ser	Pro	Asp	Arg	Gln	Ala	Glu	Met	Leu	Gln	305	310	315	320
Asn	Leu	Thr	Pro	Pro	Pro	Ser	Tyr	Ala	Ala	Thr	Ile	Ala	Ser	Lys	Leu	325	330	335	
Ala	Ile	His	Asn	Pro	Asn	Leu	Pro	Thr	Thr	Leu	Pro	Val	Asn	Ser	Gln	340	345	350	
Asn	Ile	Gln	Pro	Val	Arg	Tyr	Asn	Arg	Arg	Ser	Asn	Pro	Asp	Leu	Glu	355	360	365	

Lys Arg Arg Ile His Tyr Cys Asp Tyr Pro Gly Cys Thr Lys Val Tyr  
 370 375 380

Thr Lys Ser Ser His Leu Lys Ala His Leu Arg Thr His Thr Gly Glu  
 385 390 395 400

Lys Pro Tyr Lys Cys Thr Trp Glu Gly Cys Asp Trp Arg Phe Ala Arg  
 405 410 415

Ser Asp Glu Leu Thr Arg His Tyr Arg Lys His Thr Gly Ala Lys Pro  
 420 425 430

Phe Gln Cys Gly Val Cys Asn Arg Ser Phe Ser Arg Ser Asp His Leu  
 435 440 445

Ala Leu His Met Lys Arg His Gln Asn  
 450 455